# Appendix C

# **GLOSSARY OF UAL**

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

#### 1. General.

- A. This glossary is intended to provide definition of abbreviations, acronyms, idioms, terms and action verbs used by United Airlines Maintenance Operations Division.
- B. This glossary does not cover acronyms or abbreviations used for specific parts or systems on aircraft.
- C. Refer to the aircraft maintenance manual or fault isolation manual for the specific aircraft involved for part or system terms.
- D. This glossary is divided into sections to assist in locating the desired word:
  - (1) Action verbs
  - (2) Abbreviations and Acronyms
  - (3) Definition of terms.

#### 2. Rules.

- A. Construction for definitions imply the following, unless the context requires otherwise:
  - (1) Words importing the singular include the plural and vice versa.
  - (2) Words importing the masculine gender include the feminine.
  - (3) The word "includes" means "includes but is not limited to".
  - (4) The definitions provided in this document are intended to supplement the definitions found in Federal Aviation Regulations (FAR's) 1 and 43, and the definitions found in United Airlines' Maintenance Manual, Volume I, Book 1, 2-0-0-1 and GN/MM 8-0-1-1

#### Action Verbs

Accomplish - To do, carry out or bring about; to reach an objective.

Activate - To make active.

Actuate - To put into mechanical motion or action; to move to action.

Add - To put more in.

Adjust - To bring to a specified position or state. To bring to a more

satisfactory state. To manipulate controls, levers, linkage, etc. To return equipment from an out-of-tolerance condition to an in-tolerance

condition.

Advance - To move forward: to move ahead.

Align - To bring into line, to line-up. To bring into precise adjustment. To

correct relative position or coincidence.

Allow - To permit, to give opportunity to, to allot or provide for.

Assemble - To fit and secure together the several parts of. To make or form by

combining parts.

Assist - To give support or help; to aid.

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

Back Off - To cause to go in reverse or backward.

Bag - To put hardware in a bag.

Be Sure - To to confirm that a proper condition exists. To find out with certainty.

Be Carefu - To exercise caution, to take care.

Bend - To turn or force from straight or even to curved or angular. To force

back to an original straight or even position.

Bleed - To extract or let out some or all of a contained substance. To remove.

Block - To place an obstruction to prevent movement.

Calibrate - To determine accuracy, deviation or variation by special

measurement or by comparison with a standard.

Cap - To install a device for closing off the end of a tube.
Catch - To prevent from falling to the ground. To capture.
Center - To adjust so that axes coincide. To place in the middle

Chamfer - To bevel an edge.

Check - To confirm or establish that a proper condition exists.. To

ascertain accuracy, safety or performance. To confirm or

determine measurements by use of visual or mechanical means. To perform a visual observation or check for specific condition. To test the condition of. "CHECK" used in place of "INSPECT" indicates

a Mechanic in place of an Inspector

Clean - To wash, scrub or apply solvents to; remove dirt, corrosion or

grease.

Clear - To move people and/or objects away from.

Close - To install a plate, panel or cover. To block against entry or passage;

to turn, push or pull in the direction in which flow is impeded. To set a circuit breaker into the position allowing current to flow through.

Coat - To cover or spread with a finishing or protecting layer.

Code - To put into the form or symbols of a system used to represent

words. To mark with identifying symbols. To put into the form or

symbols of a system used to represent words. To mark with

identifying symbols.

Compare - To examine the character or qualities of two or more items. To

discover resemblance's or differences.

Compensate - To allow for.

Complete - To finish. To fill in blank spaces on form.

Compress - To squeeze together. To condense air from fluid.

Compute - To determine by arithmetic processes.

Connect - To bring or fit together so as to form a unit, to couple keyed or

matched equipment items. To attach or mate an electrical device to a

service outlet.

Continue - To persist in an action.

Coordinate - To bring into a common action, movement or condition.

Correct - To make or set right, to alter or adjust so as to bring to some standard

or required condition.

Cover - To protect or shelter by placing something over or around.

Cut - To divide into parts using a sharp instrument such as a scissors or

knife.

Cycle - Operate to each extreme.

Deburr - To remove burrs.
Defuel - To remove fuel.
Deodorize - To remove odor.

Depress - To press or push down.

Depressurize - To release gas or fluid pressure.

## ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

Determine - To obtain definite and first-hand knowledge of, to confirm or establish

that a condition exists. To investigate and decide, to discover by

study or experiment.

Disassemble - To take to pieces. To take apart to the level of the next smaller unit or

down to all removable parts.

Discard - To throw away.

Disconnect - To sever the connection between; to separate keyed or matched

equipment parts. To detach or separate (an electrical device) from a

service outlet.

Disinfect - To remove germs with chemicals.

Disengage - To release or detach interlocking parts, to unfasten. To set free from

an inactive or fixed position.

Drill - To make a hole with a drill. To remove an obstruction in a hole with a

drill.

Drain - To draw off (liquid) gradually or completely. To cause to be

free from water or liquid.

Energize - To give energy to.

Engage - To cause to interlock or mesh.

Enlarge - To make bigger. Enter - To put on record.

Extend - To cause to be drawn out to fullest length.

- To put into as much as can be held or conveniently contained.

Fit - To shape, trim, adjust or manipulate.

Flush - To pour liquid over or through. To wash out with a rush of liquid

Form - To give a particular shape to; to shape or mold into a certain state. To

make-up.

Fuel - To put fuel in tanks.

Ground - To connect a current, wire or a piece of electrical equipment to a

ground or other specified surface.

Guide - To manage or direct the movement of.

Hold - To have or keep in the grasp.

Identify - To establish the identity of. To mark with identifying name or number.

Inflate - To fill with a given amount of gas or air.

Inform - To make known to. To give notice or report the occurrence of.

Insert - To put or thrust in, into or through.

Inspect - To perform a visual observation or check for specific conditions.
Install - To perform operations necessary to properly attach one

component to another component or the next larger assembly.

Latch - To catch with a device which holds a door when closed, even if not

bolted.

Leave - To let remain. To allot or provide for.

Level - Cause the airplane or component to be level on its lateral and

longitudinal axis.

Lift - To move or cause to be moved from a lower to a higher position. To

elevate.

Light - (or lite) To cause to illuminate.

List - Record or write down.

Locate - To find, determine or indicate the place, site or limits of.

Lock - To hold fast or inactive. To fix.

Loosen - To release from restraint,. To cause to become less tight - To cause to move down. To depress as to direction.

Lubricate - To put lubricant on specified locations.

(or Lube)

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

Maintain - To hold or keep in any particular state or condition, especially in a

state of efficiency or validity.

Make - To carry out or cause to occur.

Mark - To label, to provide with an identifying or indicating symbol.

Mask - To protect with paper; foil or tape.

(or Mask Off)

Measure - To determine the dimensions, capacity or amount by use of standard

instruments or utensils.

Mix - To combine or blend into one mass.

Modulate - To vary input or output.

Monitor - To visually take note of. To pay attention to in order to check on

action or change. To continually or periodically attend to displays to determine equipment condition or operating status.

Move - To change the location or position of.

Notify - To make known to. To give notice or report the occurrence of.

Observe - To conform one's actions or practice to. To visually take note of. To

pay attention to.

Obtain - To get or find our by observation or special procedures. To gain

or attain.

Open - To move from closed position. To make available for passage by

turning in an appropriate direction. To remove a plate or cover.

Operate - To control equipment in order to accomplish a specific purpose.

Pack - To fill completely with grease.

Paint - To apply color or pigment (suspended in suitable liquid) to the

surface of.

Perform - To do carry out or bring about; to reach an objective. To do. To carry

out or bring about. To reach an objective.

Place - To put or set in a desired location or position.

Plug - To provide with a device for closing the end of a tube or hole.

Plug In - To attach or make an electrical connection.

Polish - To shine.

Position - To put or set in given place. To locate.

Prepare - To make ready; to arrange things in readiness. To prepare or make

ready for a maintenance activity.

Prescribe - To lay down as a guide, direction or rule of action; to specify with

authority.

Press - To act upon through thrusting force exerted in contact.

Pressurize - To apply pressure within by filing with gas or liquid.

Prevent - To keep from happening or existing.
Process - To enter corrective action on write-up.
Provide - To supply what is needed, to equip.

Pry - To raise or move with a lever.

(or pry off)

Pull - To exert force upon an object so as to cause motion toward the force.

Purge - To free of sediment or trapped air by flushing or bleeding. To

remove fuel vapors by ventilating.

Push - To press against with force so as to cause motion away from force.

To move away or ahead by steady pressure.

Put - To place in or through. To place or set in a desired position or

location. To deposit or leave. To lay or spread on or in.

Raise - To move or cause to be moved from a lower to a higher position. To

elevate.

Read - To interpret the meaning of by visual observation.

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

Readjust - To adjust again, to move back to a specified condition. To bring back

to an in tolerance condition.

- To enlarge hole with reamer.

Ream - To enlarge hole with reamer.

Reassemble - To refit and secure together the parts of, after they have been taken

apart.

Recondition - To renew. To bring or put back into good condition. - To rejoin or refasten that which has been separated.

Record - To set down in writing.

Reduce - To cause to be diminished in strength, density or value.

Refer - See for further aid or information.

Refurbish - To restore cabin items to acceptable appearance.

Regulate - To fix or adjust the time, amount or rate of. To exercise restraining or

directing influence over.

Reinstall - Install again that which was installed before.

Release - To set free from an inactive or fixed position. To unfasten or detach

inter-locking parts. To let go of. To set free from restraint or

confinement.

Relieve - To ease or set free of a burden, to partially release air of fluid from

containment.

Remove - To perform operations necessary to take an equipment unit out of the

next larger assembly or system. To take off or eliminate.

Repair - To restore damaged, worn-out or malfunctioning equipment to a

serviceable, usable or operable condition.

Repeat - To make, do or perform again.

Replace - To substitute serviceable equipment for malfunctioning, worn-out or

damaged equipment.

Replenish - To fill or build up again.

Repressurize - To reapply pressure within by filling with gas or Liquid after pressure

has been released.

Request - To ask for.

Reset - To put back into a desired position, adjustment or condition.

Restore - To bring back or put back into a former or original state.

Retain - To keep for reinstallation.

Retard - To manipulate so as to hold back or slow down. To hold back or slow

down.

Retract - To draw up against or into the airplane.

Return - To bring, send or put back to a former or proper place.

Re-use - Use again.

Rework - To reprocess for further use. To revise.

Rig - To adjust systems or components to specific dimensions or limits.

Rinse - To cleanse (as from soap used in washing) by clear water.

Rope Off - To partition, separate or divide by a rope. - To cause to revolve about an axis or center.

Route - To send to a specific place or places.

Safety - To install a device to prevent loosening or disassembly.

Scrap - Throw away to prevent re-use.

Screw - To attach by means of a twisting motion in the proper direction.

Seal - Apply sealant.

Secure - To make fast or safe.

Sell - Submit to inspection for approval.

Separate - To take apart.

Select - To take by preference or fitness from a number or group, to pick out,

to choose.

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

Service - To perform such operations as cleanup, lubrication,

replenishment, etc.

Set - To put a switch, pointer or knob into a given position. To put

orientation or location.

Shake - To move or cause to move to and fro in a quick, jerky manner.

Shim - To set clearance by installing shims.

Shrink - Make smaller.

Shutdown - To perform operations necessary to cause an equipment to cease or

suspend operation.

Simulate - To give the appearance or effect of.

Slack Off - Relieve tension or tightness.

Slide - To cause to move in a smooth manner over a surface.

Spin - To cause to revolve rapidly.

Spray - To apply with a device which disperses a jet of finely divided liquid.
Start - To perform actions necessary to set into operation, to set going, to

begin.

Stencil - Letter with a stencil.

Stir - To blend.

Stop - To perform actions necessary to cause an equipment to cease or

suspend operation.

Store - To deposit or Leave in a specified place for future use.

Strip - Remove insulation at end of wire.

Support - To hold up or provide a foundation or props for.

Synchronize - To cause to happen at the same time.Tag - Attach an, I&R, R&R, tire, or salvage tag.

Take - To get into or carry in one's hands or one's possession. To get or

find.

Tap - To strike lightly.Tell - Give information.

Tension - Tighten (as in cables, chains, etc.)

Test - To perform specified operations to verify operational readiness of a

component, sub component, system or subsystem.

Tie - To fasten, attach or close by means of a line or cord.

Tighten - To perform necessary operations to fix more firmly in place. To

apply a specified amount of force to produce a rotation or twisting

motion. To fix more firmly in place.

- To cause to slope, lean or incline.

Tilt - To cause to slope, lean or inc Torque - To tighten a specific amount.

Transfer - To convey or cause to pass from one place to another.

Trim - To free of excess or extraneous matter by or as if by cutting. To

adjust (a jet engine) to compensate for wear.

Tune - To adjust for precise functioning.

Tum - To cause to revolve about an axis or center.

Turn Off - To shutoff or stop the flow of by or as if by moving a control to its

OFF position.

Turn On - To cause to flow or operate by or as if by moving a control to its ON

position.

- To remove a device for closing off the end of a tube.

Unlock - To set free from an inactive of fixed position. To unfasten. To

detach interlocking parts.

Unplug - To detach or separate (an electrical device) from a service outlet. To

remove a device for closing off the end of a tube.

Unscrew - To loosen or withdraw by turning in the proper direction.

Unwind - To cause to uncoil or unroll.

# ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

Use - To put into action or service; to avail one self of; to carry out a

purpose or action bymeans of.

Verify - To confirm or establish that a proper condition exists. To establish the truth or accuracy of.

 To suspend activity in a sequence of activities until a given condition occurs or a given time has elapsed.

Warn - To advise of danger to personnel.

Wash - To cleanse by or as if by the action of liquid; to remove (dirt) by

rubbing or drenching with liquid.

Watch - To visually take note of to pay attention to in order to check on action

or change.

Wait

Wrap - To wind coil or twine so as to encircle or cover something.

Zero - To bring to a desired level or null position.

### 4. Acronyms

A&S Administrative and Staff

ACESS Advanced Cabin Entertainment Service System

A C Advisory Circular

ACARS ArinC Communications Addressing and Reporting System.

ACO Aircraft Certification Office (FAA)

AD Airworthiness Directive

AEG Aircraft Evaluation Group (Relates to MRB)

AFM Airplane flight Manual

AFPAM Automated Flight Planning and Monitoring

AHM Accessory Heavy Maintenance

AIF Aircraft Information File

AIR Airplane Identification Record
AIR Aerospace Information Report

AMIS Aircraft Maintenance Information System

AMOC Alternate Means of Compliance

AMOP Airframe Maintenance Operating Procedure

AMS Aerospace Material Specification

AMTOSS Aircraft Maintenance Task Oriented Support System

AN Army/Navy

AOG Aircraft On Ground

AOP Administrative and Operating Policy

APU Auxiliary Power Unit
AR Appropriation Request
AR Approved Repair

ARB Addendum Review Board

ARINC Aeronautical Radio Inc. A global communications system.

ARP Aerospace Recommended Practice

AS Aerospace Standard ASM Available Seat Mile ASV All Shop Visits

ATA Air Transport Association ATE Automatic Test Equipment

ATSOP Aircraft Technical Services Operating Procedure

BAC Boeing Aircraft Corporation

BACG Boeing Commercial Aircraft Group

BCP Basic Check Period

BFE Buyer Furnished Equipment
BMS Boeing Material Specification

BUT Business Unit Team

CAA Civil Aeronautics Administration CAA Competent Authority Approval

CAB Civil Aeronautics Board CAD Computer Aided Drafting

CARE Component Analysis and Reliability Evaluation
CASE Coordinating Agency for Supplier Evaluation

CCN Cost Control Number

CER Capital Equipment Requisition
CFR Code of Federal Regulations
CIC Corrosion Inhibiting Compound

C M Customer Maintenance C M Condition Monitoring

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

CMM Component Maintenance Manual
CMO Certificate Management Office (FAA)
CMP Configuration Maintenance and Procedures
CMR Certification Maintenance Requirement

CMS Crew Management System
CMT Customer Maintenance Tag
CNC Computer Numerical Control
COA Change Order Authorization

COAJIC Job card within COA Management System (See AMIS manual)

COAMS COA Management System

COAT Change Order Authorization Task (Replaced by

COAJIC 11/17/97) Company Material

COMIS Component Monitoring Information System

CP Corrosion Program

COMAT

CPCP Corrosion Prevention and Control Program

CPM Corrosion Prevention Manual

CRAF Civil Reserve Airfleet

CRIS Calibration and Recall Information System CSDPI Cycles Since Detail Parts Inspection

CSI Cycles Since Installation
CSN Cycles Since New
CSO Cycles Since Overhaul
CSV Convenience Shop Visit
DACO Douglas Aircraft Company

DAR Designated Airworthiness Representative

DAS Designated Alteration Station

DAT Day At a Time
DBD Detailed Breakdown

DDM Drafting and Design Manual

DER Designated Engineering Representative

DES Destroy part in a manner which precludes further use.

DOP Departmental Operating Procedure DOT Department of Transportation

DOT E Department of Transportation Exemption
DS Discard (MRB) - See DES - Destroy for UA

DSR Decision Support Request

DSSSL Document Style Semantics & Specification Language

DTD Document Type Definition DTR Damage Tolerance Rating

EAD Engineering Authorizing Document

EC Engine Change

ED Environmental Deterioration

EDR Environmental Deterioration Rating

EDR-(C) Environmental Deterioration Rating - Corrosion

EDR-(S) Environmental Deterioration Rating - Stress Corrosion

ECM Engine Condition Monitoring ECR Engineering Change Record

EEVIP Early ETOPS Validation & Integration Program

EHM Engine Heavy Maintenance

EICAS Engine Indicating Crew Alert System EID Engineering Inspection Document

EIF Engine Information File EIN Engineering Index Number

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

EMAC Engineering Maintenance and Control

EMSYS Engineering Maintenance System (Obsolete see TIMS)

EPA Environmental Protection Agency

EPM Engine Parts Monitoring ER Engineering Release

EROPS Extended Range Operating Procedures

ESV Engine Shop Visit

ETOPS Extended Twin (Engine) Operations

EVA Engineering Variation Authority

EXO Executive Offices (Obsolete see WHQ)

FAA Federal Aviation Administration FAR Federal Aviation Regulation

FC Functional Check

FCC Federal Communications Commission

FD Fatigue Damage

FDA Food and Drug Administration

FLM Flight Log Monitoring FLS First Level Supervisor

FLT Flight

FMS Financial Management System
FMS Flight Management System
FOD Foreign Object Damage

FOSI Functional Output Specification Instance FSDO Flight Standards District Office (FAA)

FV Function Verification

GEMM Ground Equipment Maintenance Manual GEVA Ground Equipment Variation Authority

GN General Notes GT Green Time

GV General Visual Inspection
HIRF HIgh Intensity Radiated fields
HMV Heavy Maintenance Visit
HOOS Held Out Of Service

HT Hard Time

I&R Identification and Routing

IATA International Air Transport Association ICAO International Civil Aviation Organization

IFSD In-Flight Shut Down
IGW Increased Gross Weight
IPC Illustrated Parts Catalog
ISC Industry Steering Committee
ISO International Standards Organization

IVS Individual Video System

JAA Joint Aviation Authorities (Europe)

JD Joint Document
JIC Job Instruction Card
JPC Job Planning Card

LECD List of Effective Control Dates

LED List of Effective Dates
LEP List of Effective Pages
LRU Line Removable Unit
LU Lubrication Task

MBM Master Bill of Materials MC Maintenance Center

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

MCP Mode Control Panel

MDC McDonnell Douglas Corporation

MEL Minimum Equipment List

MER Maintenance Evaluation Request

MIQ Maximum Issue Quantity

MIS Management Information System MIS Mechanical Interruption Summary

M M Maintenance Manual

MMS Materials Management System
MOC Maintenance Operations Center
MOD Maintenance Operations Division
MPD Maintenance Planning Document
MPP Maintenance Program Proposal

MPV Mid Period Visit
MR Maintenance Record
MRA Major Repair Authority
MRB Maintenance Review Board

MRBPB Maintenance Review Board Policy Board MRBR Maintenance Review Board Report

MRR Mechanical Reliability Report

M S Military Standard

MSA Mean Spares Allocation

MSA Maintenance Spares Assignment MSDS Material Safety Data Sheet MSG Maintenance Steering Group

MSG-3 Maintenance Steering Group - 3rd Task force

MSI Maintenance Significant Items
MSP Maintenance Supply Procedures
MSS Modification Summary Sheet
MTBF Mean Time Between Failure

MTBUR Mean Time Between Unscheduled Removals

NAS National Aerospace Standards

NBR Number

NDI Non-Destructive Inspection
NDT Non-Destructive Testing
NHA Next Higher Assembly

NIOSH National Institute of Occupational Safety and Health

Administration

NIST National Institute of Standards and Technology

NRC Nuclear Regulatory Commission NTSB National Transportation Safety Board

OBLS On Board Loadable Software

OC On Condition

ODAR Organizational Designated Airworthiness Representative

OEM Original Equipment Manufacturer
OER Organizational Expense Report
OPS Organizational Pay Summary

OSHA Occupational Safety and Health Administration

OSV Outside Service Vendor
P&W Pratt and Whitney
PC Personal Computer
PCN Part Control Number

PCSS Part Condition Sampling Schedule

PEP Personnel Evaluation Report

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

PMA Parts Manufacturer Approval PME Paid Manpower Equivalent

PN Part Number
PO Purchase Order
POS Parts Order System
PR Project Request

PRS Premature Removal System
PRS Profitability Reporting System
PSE Principal Structural Element
QEC Quick Engine Change

R & R Repair and Return
RAS Recoverable Assembly Specification

RCCE Request for Computer and Communication Equipment

RFPA Request For Purchasing Action

RFU Rejection Follow-Up
RII Required Inspection Item

RO Repair Order RS Restoration Task

RSPI Recoverable System Physical Inventory

RU Repair, United initiated

SAE Society of Automotive Engineers

SAMC System Aircraft Maintenance Coordination

SB Service Bulletin

SCR Stores Change Release
SDI State Disability Insurance
SDI Special Detailed Inspection
SDR Service Difficulty Report

SFAR Special Federal Aviation Regulation
SGML Standard Generalized Markup Language
SID Supplemental Inspection Document

SIP Shop Input Priority

SIPD Structural Inspection Planning Date
SMC Station Maintenance Controller
SNAR Stores Notice Action Request
SPA Spare Parts Assignment
SRM Structural Repair Manual

SSI Structurally Significant Item (also see PSE)

STC Supplemental Type Certificate

S V Servicing Task

SWR Special Work Request T&Q Training and Qualification TBO Time Between Overhauls

TC Type Certificate

TCAS Traffic Alert and Collision Avoidance System

TDRS Technical Data Routing Slip
TIC Technical Information Center
TICS Tool Inventory Control System

TIMS Technical Information Management System

TMA Technical Manual Assignment

TMAE Technical Manual Assignment Electrical

TMC Transfer of Material and Charges
TMM Typical Maintenance Manual
TOD Task Oriented Document

TSDPI Time Since Detail Parts Inspection

# ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS Time Since Installation

TSI Time Since Installation
TSN Time Since New
TSO Time Since Overhaul

TSR Technical Services Request

TT Total Time
UA United Airlines
UAL United Air Lines

UCI United Cogen Incorporated

UECP United Employees Charitable Program

UG United General

UMS United Material Specification

UN United Nations

UR Update Responsibility USI United Services Inc.

VADE Valid Accounting and Detailed Evaluation

V C Visual Check Task WUT Work Unit Team ZA Zonal Analysis

#### Definition of Terms

Accessory: Refer to ASSEMBLY

## Accidental Damage:

Physical deterioration of an item caused by contact or impact with an object or influence which isd not a part of the aircraft, or by human error during manufacturing, operation of the aircraft, or maintenance practices.

## Administrative and Operating Policy (AOP):

AOP's define the purpose, policies and requirements that govern MOD Maintenance organizations (EG Ref: AOP 10-05-00-01).

#### Age Exploration

A systematic evaluation of an item based on analysis of collected information from inservice experience. It assesses the item's resistance to a deterioration process with respect to increasing age.

### Age-Reliability Relationship:

The relationship of reliability to the age of the item under study usually in terms of Total Time (TT) or Time Since Overhaul (TSO).

#### AHM Limit:

The overhaul time limit of an AHM unit. The limit is listed in the Parts Condition Sampling Schedule (PCSS).

#### Aircraft On Ground (AOG):

- (1) The highest priority designation to process a requirement for a spare part(s) and/or maintenance action.
- (2) This designation indicates that an aircraft is unable to continue or be returned to revenue service until appropriate action has been taken.

## Airframe:

The fuselage, nacelles, cowlings, fairing, airfoil surfaces and landing gear of an aircraft and their accessories and controls.

#### Airframe Overhaul:

Refer to Basic Check Period (BCP) and Heavy Maintenance Visit (HMV).

## Airworthiness Directive (AD):

An FAA requirement that provides the specifications and timetable for correcting conditions which may affect the airworthiness of an aircraft (EG Ref: AOP 28-25-10-01).

#### Airworthiness Limitations:

A section of the instructions for Continued Airworthiness that contains each mandatory replacement time, structural inspection interval, and related structural inspection procedure. This section may also define a threshold for the fatigue related inspections. The information contained in th Airworthiness Limitations section may be changed to reflect service and/or test experience or new analysis methods.

## ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

### Airworthy:

- An aircraft can be considered airworthy when it conforms to the specifications of (1) its Type Certificate and is in a condition for safe operation. If one or both of these conditions are not met, the aircraft is "unairworthy."
- Conformity to type design is considered attained when the required and proper (2) components are installed and they are consistent with the drawings, specifications, and other applicable supplemental type certificates and field approved alterations.
- (3)"Condition for safe operation" refers to the condition of the aircraft with relation to wear and deterioration. Such conditions might include skin corrosion, window delamination/crazing, fluid leaks, tire wear, etc.

#### Alteration:

A modification to an aircraft, engine, or component which is made to improve safety, reliability, economy, passenger appeal, etc. Accomplishment schedule is normally unrelated to the condition of the equipment.

#### Annual:

Has two slightly different meanings pertaining to aviation: Occurring regularly once a year, yearly; Of/or pertaining to a year. This ambiguity is unacceptable for maintenance specifications. Specify calendar maintenance intervals in terms of days (1 month = 30.4) days).

## Approved Repair(AR)

- A repair for a part which has been developed and approved for use by United's (1) Engineering Department. (EG Ref: AOP's 40-65-00-02 and 40-65-00-09.)
- (2) The term "AR" is also used by the Finance Department to refer to an Appropriation Request.

#### Assembly:

A number of parts or sub-assemblies joined together to perform a special function. An assembly may also be called an accessory, or unit.

## Assembly Parent:

The particular highest assembly (next, second, third, etc.) whose overhaul plan is used as the overhaul plan(s) of units or subassemblies that are attached to it.

## All Shop Visits (ASV):

ASV is a hard time limit based on shop visits. Task so labelled must be accomplished at each shop visit

(EG Ref: AOP 45-50-30-01).

#### Base Check - Engine:

(1) The maintenance operations performed on an engine (off the airplane) to "zero time" a C Check or Phase Check.

#### Basic Check Period (BCP):

- Specifies the maximum interval that an aircraft may be operated before accomplishment of major structural sampling, system tests, and general mechanical and appearance restoration.
- (2) The BCP together with other more frequently scheduled maintenance assures the continuous airworthiness of the aircraft.
- The term "BCP" is also referred to as D Check.
- (3) (4) Also refer to airframe overhaul.

## Basic Engine Removal:

The removal of an engine for any actual malfunction, failure or defect of an engine part listed under ATA Chapter 72 of thEeEngine Manual.

NOTE: Failures or discrepancies of parts as a result of FOD or personnel error fall in the "Non-Basic" category (Ref. Non-Basic Engine Removal definition).

## Block Maintenance Program:

- (1) A program that divides major structural inspections and/or maintenance tasks into groups or blocks accomplished at more frequent intervals than the major inspection interval.
- (2) This term may also refer to a program having the characteristics of accomplishing different content at subsequent visit for the same type of check.

## Buyer Furnished Equipment (BFE):

That portion of an aircraft's equipment that is supplied by the buyer rather than the manufacturer in accordance with a special agreement.

#### CAUTION

Calls attention to methods, procedures or limits which must be followed precisely to avoid DAMAGE TO EQUIPMENT.

#### Certificated Air Carrier:

An air carrier that is required either by its FAA approved

Operating Certificate or Operations Specifications - Maintenance to perform continuous airworthiness maintenance and inspection of its equipment in accordance with its maintenance manual.

## Certification Maintenance Requirement (CMR):

Provides the specifications for certain maintenance requirements that were imposed by the FAA as part of their process of certifying the aircraft for its intended use.

#### Change Order Authorization (COA):

The COA establishes a one-time modification, inspection, or service evaluation (test) for an aircraft, engine, or component. (EG Ref: AOP 45-07-28-01)

#### COA Removal:

The removal of a unit for repair or modification as required by a specific COA.

#### Code 4T Pool:

The operating pool of spare recoverable units that consists of the various inventory allocations, such as: serviceable pool, repairable pool, shop in-process, in-transit, etc., but not

including those units making up safety stock, reserve supply, due next higher assembly, etc., installed in airplanes.

#### Company Material (COMAT):

Property owned by, or lease by United Airlines, and flown on a non-revenue basis in company aircraft.

### Component:

## ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

- (1) A term used to denote a subassembly, assembly, unit, or piece parts such as internal engine components.
- (2) Refer also to the term "part".

## Condition Monitoring (CM):

- (1) One of the four primary maintenance processes. It does not require scheduled preventative maintenance.
- (2) CM depends on surveillance, data collection, and analysis to provide judgements relative to the effectiveness of a unit's maintenance program.

## Configuration Maintenance and Procedure (CMP):

Maintenance and procedures required to qualify an aircraft for ETOPS operations.

#### Conditional Overhaul:

Refer to Overhaul

## Conditional Probability of Failure:

- (1) The proportion of units entering an age interval and that fail during that interval.
- (2) A graphic curve connecting such failure points for many intervals.

#### Convenience Removal:

- (1) Removal of a unit for reasons not related to the condition or time limit of the unit.
- (2) The removal of a unit for causes that could have been corrected while the unit was installed on the airplane.

## Convenience Shop Visit (CSV):

An engine repair done in the shop which could have been done in the field.(EG Ref: AOP 45-50-30-01)

#### Corrosion Control Program:

An industry standardized program that documents evidence that airplanes are structurally maintained at an acceptable level within Original Equipment Manufacturer's specified limits

(EG Ref: AOP 28-25-10-04).

## Corrosion Prevention and Control Program

A program of maintenance tasks implemented at a threshold designed to maintain an aircraft structure to Corrosion Lever 1, or better.

#### Critical Failure:

Failure of a unit that may result in a significant reduction of the continued airworthiness of the airplane.

## Cycle:

- (1) An aircraft operating cycle is one complete takeoff and landing sequence.
- (2) An engine operating cycle is one complete thermal cycle including the application of takeoff power whether or not an aircraft operating cycle was completed.

#### Damage Tolerant:

- (1) A qualification standard for aircraft structure.
- (2) An item is judged to be damage tolerant if it can sustain damage and the remaining structure can withstand reasonable loads without structural failure or excessive structural deformation until the damage is corrected.

#### Delamination/disbond:

Structural separation or cracking normally in the plane of the structure caused by accidental damage, environmental effects and/or cyclic loading.

## Destroy

Mutilation of an item in such a manner that the item becomes unsalvageable for its intended use and that rework or camouflage cannot restore the item to the appearance of being serviceable.

## Direct Adverse Effect on Operating Safety:

#### Direct

To be direct, the function failure or resulting secondary damage must achieve its effect by itself, not in combination with other functional failures (no redundancy exists and it is a primary dispatch item).

### Adverse Effect on Safety

This implies that the consequences are extremely serious or possibly catastrophic and might cause loss of the aircraft or injury to the occupants.

#### Operating

This is defined as the time interval during which passengers and crew are on board for the purpose of flight.

#### Discard:

The removal from service of an item at a specified life limit. See Destroy.

#### Diversion:

Aircraft arrival at a non-scheduled field for any reason.

#### **Economic Effects:**

Failure effects which do not prevent aircraft operation, but are economically undesirable due to added labor and materal cost for aircraft or shop repair.

#### Electrical Inspection Specification F Report:

- (1) Specifies the minimum acceptable program to assure continuing electrical wiring system integrity of the aircraft.
- The requirements cover the basic electrical wiring installation, connectors, and terminations on the airplane, the types of inspections, and the minimum inspection frequencies (EG Ref: AOP 45-40-00-01).

#### Engine:

The basic engine and components as defined in Chapters 70 through 80 and Chapter 82 of ATA Specifications 100.

## Engineering and Maintenance Control (EMAC):

The EMAC systems specifying the maintenance tasks and intervals for aircraft systems and the maintenance processes and intervals for aircraft components. [EG Ref: AOP 45-50-30-01 (Component EMAC) and AOP 45-50-30-04 (System EMAC].

#### Engineering Specifications:

- (1) A United Airlines' document issued by Engineering Department.
- (2) The document may specify mandatory overhaul requirements for a particular type of maintenance.

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(3) The document may provide supplementary information such as on condition maintenance specifications that are needed to determine if a unit or system passes its mandatory technical requirements.

### Engineering Variation Authority (EVA):

The EVA is used to provide written authorization for practices that may change or are not covered in the maintenance manuals. (EG Ref: AOP 45-09-00-01)

## Engine Shop Visit (ESV):

Engine Shop Visit is a hard time limit based on shop visits. Task is accomplished whenever engine transits the turbine shop (EG Ref: AOP 45-50-30-01).

#### **Environmental Deterioration:**

Physical deterioration of an item's strength or resistance to failure as a result of chemical interaction with its climate or environment.

## Expendable Part:

- (1) A type of part that cannot normally be economically restored to a serviceable condition after it has been used.
- (2) A part that is considered an expense item at the time it is issued.

## Expendable - Recoverable:

- (1) A term used to describe low value, high consumption parts that are expensed at the time of their issue and recovered into stock when they are repaired.
- (2) The initial repair pool, component and spares, is carried as an asset in Code 4.

### **Extended Overwater Operation**

An operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline (FAR Part 1).

#### Extended Range Operations (EROPS):

Extended operations using an aircraft that has been modified with extra fuel tanks (usually in the cargo pits) to provide additional range.

#### Extended Twin (two-engine airplane) Operations (ETOPS):

Flights conducted over a route that contains a point further than one hour flying time at the approved one-engine inoperative cruising speed (under standard conditions in still air) from an adequate airport (defined in AC120-42A). Applkies to any flight either over land or water.

#### Extended Overwater Operation:

Operation of an aircraft over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline.

#### External:

Any externally visible structure or systems/powerplant item. It may include internal structure or installations which are visible through quick access or opening access panel doors. Workstands. ladders, etc. may be required to gain proximity.

#### F Report:

A formal report by Engineering on a technical subject such as aircraft structure or electrical wiring specifications.

#### Failure

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The inability of an item to perform within previously specified limits.

#### Failure Cause:

Why the functional failure occurs.

#### Failure Effect

What is the result of the functional failure.

#### Failure Modes:

The ways in which units, systems, and aircraft deteriorate and can be considered to have failed.

## Fatigue Damage:

The initiation of a crack or cracks due to cyclic loading and subsequent propagation.

### Fatigue Related Sampling Program

Inspections on specific aircraft selected from those which have the highest operating age/usage in order to identify the first evidence of deterioration in their condition caused by fatigue damage.

### Federal Aviation Regulation (FAR):

The basic legal regulations that must be complied with by aircraft operators.

### Fireproof:

- (1) A term designating the capacity of materials and parts, used to confine fire in a designated fire zone, to withstand, as well as steel in dimensions appropriate for the purpose for which they are used, the heat produced when there is a severe fire of extended duration in that zone.
- (2) A term designating the capacity of other materials and parts to withstand, as well as steel in dimensions appropriate for the purpose for which they are used, the heat associated with fire.

#### Fire Resistant:

- (1) A term designating the capacity of sheet or structural members to withstand, as well as aluminum alloy in dimensions appropriate for the purpose for which they are used, the heat associated with fire.
- (2) A term designating the capacity of fluid-carrying lines, fluid system parts, wiring, air ducts, fittings, and powerplant controls, to perform their intended functions under the heat and other conditions likely to occur when there is a fire at the place concerned.

## Flame Resistant:

Means not susceptible to combustion to the point of propagating a flame, beyond safe limits, after the ignition source is removed.

#### Flash Resistant:

Means not susceptible to burning violently when ignited.

## Fleet:

- (1) All airplanes of a given type, such as DC10 or 747, operated by an air carrier.
- (2) For purposes of new aircraft sampling, the fleet size is the number of aircraft of a given type on order by the carrier when scheduled operations begin.

## Flight Equipment:

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A term used to describe all recoverable units and expendable parts, except hardware, used on airplane structures and systems.

#### Function

The normal characteristic actions of an item.

### Function Verification (FV):

- (1) One of the four primary maintenance processes.
- (2) FV requires repetitive tests to test hidden functions and verify their operational availability.

#### Functional Check:

A quantitative check to determine if one or more functions of an item performs within specified limits.

#### Functional Failure

How an item failed to perform its fuction.

### Hard Time (HT):

- (1) One of the four primary maintenance processes.
- (2) HT requires a fixed limit removal for life limited parts, overhaul or serviceable maintenance.

#### Hardware:

Small standard parts including such things are nuts, bolts, and washers.

### Heavy Maintenance Visit (HMV):

- (1) The most extensive maintenance visit of certain fleets.
- (2) The time limit between HMV's is specified in the Operations Specifications Maintenance.
- (3) The HMV supersedes the BCP on fleets that have an approved HMV.

#### Hidden Function:

- (1) An item whose function is normally active and whose cessation will not be evident to the operating crew during performance of normal duties. (EG Ref: AOP 45-50-30-01)
- (2) A function which is normally inactive and whose readiness to perform, prior too it being needed, will not be evident to the operating crew during performance of normal duties.

#### Higher Assembly:

The assembly or assemblies on which the particular unit under discussion is attached either directly or through intermediate assemblies.

#### Home Shop:

The shop which has the prime budgetary responsibility for a particular unit.

#### Hours. Block:

The number of hours accumulated by an airplane from the time it first moves for a flight until it comes to rest at its intended blocks at the next point of landing. (Not used for maintenance.)

### Hours, Flying:

(1) The number of hours accumulated by an airplane from wheels-off to wheels-on.

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- (2) United Airlines uses flying hours for all maintenance purposes for which time is controlled in hours.
- (3) Refer to Operating Time.

Industry Performance Report:

- (1) These report describes airlines' experience concerning aircraft, systems, engines, and components.
- (2) Typical reports which are generated in the industry are the Mechanical Reliability Reports (MRR's) and the Mechanical Interruption Summary (MIS).

Inherent Level of Reliability and Safety:

That level which is built into the unit and therefore inherent in its design. This is the highest level of rleiability and safety that can be expected from a unit, system, or aircracft if it receives effective maintenance. To achieve higher levels of reliability generally requires modification or redesign.

## Inspection:

An examination of an item against a specific standard.

Inspection, Detailed or Special Detailed:

- (1) A critical visual examination of a specific area, installation, or assembly, to detect damage, failure, or irregularity.
- (2) Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate by the inspector.
- (3) Inspection aids such as mirrors, magnifying lenses, and dye penetrant are used. Surface cleaning and elaborate access procedures may be required.

Inspection, General Visual (Surveillance) See Inspection, Visual

Inspection, Special Detailed See Inspection, Detailed

Inspection, Visual or General Visual (Surveillance):

- (1) A visual examination of an interior or exterior area, installation, or assembly, to detect obvious damage, failure, or irregularity.
- (2) This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight, and may require removal or opening of access panels or doors. Stands, ladders, or platforms, may be required to gain proximity to the area being checked.

#### Inspection Walk Around:

- (1) A general visual check, conducted from ground level, to detect obvious discrepancies, determine general condition, and ensure security.
- (2) Suspect areas are given further scrutiny using one or more additional inspection techniques.

#### Inspection, Zonal:

See Zonal Inspection Program.

## Internal:

An internal structures or systems/powerplant installation. This type of inspection applies to structures and installations which may require removal of fillets, fairings, access panels, doors, etc.

#### Item:

Any level of hardware assembly. (i.e. system, sub-system, module, accessory, component, unit, part, etc.)

## Job Instruction Cards (JIC):

- (1) Any work form which controls sequence or requires accomplishment sign-off is a job card.
- (2) JIC's are a basic part of the maintenance, production, and quality control system. (EG Ref: AOP 45-55-30-01)

#### Joint Document (JD):

An official Engineering and Maintenance document which combines engineering specifications and maintenance procedures (EG Ref: AOP 40-65-00-02.

#### Junk:

A unit that is considered to be neither serviceable nor repairable.

#### Life Limit:

The maximum age of a unit before it must be reworked or scrapped. Also called Total Time Limit. Usually expressed in flight hours or cycles rather than calendar time.

## Lubrication and Servicing:

Any act of lubricating or servicing for the purpose of maintaining inherent design capabilities.

#### Mach Number

The ratio of true airspeed to the speed of sound.

#### Maintenance:

Refer to Maintenance Operations.

## Maintenance Manual (MM), Volume I, Book 1:

- (1) Specifies maximum times between maintenance checks and the stations qualified to perform specified checks.
- (2) List maintenance requirements for non-standard types of operations and defines the deferred item policies (EG Ref: AOP 40-65-00-01).

#### Maintenance Manuals (MM):

Provides instructions for accomplishing various repairs and specifies when certain maintenance requirements are to be performed. (EG Ref: AOP 40-65-00-01)

#### Maintenance Operations:

- (1) The types of work performed on a unit or system which are considered necessary to restore, preserve or improve its physical condition to a specified level.
- (2) This work may include any or all of the following: operational check, inspection, disassembly, cleaning, repair, rework, measurement, replacement of parts, reassembly, testing, lubrication, adjustment, etc.
- (3) The engineering specifications state the extent and type of maintenance operations required for each type of maintenance.

## Maintenance Center (MC):

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United Airlines Maintenance Center at Oakland, Chicago and Indianapolis.

Maintenance Operations Center (MOC):

United Airlines' Maintenance Operations Center at San Francisco.

## Maintenance Planning Document (MPD):

A document provided by the airframe manufacturers to permit operators to plan and schedule maintenance. (Section 9 of the Boeing MPD contains the CMR's.)

## Maintenance Program:

- (1) A program that assures continuous airworthiness by apportioning the total maintenance effort to each of the various and frequent types of maintenance.
- (2) This program would be more frequent than a Block Maintenance Program. A complete overhaul at one point in time is not an essential part of a continuous maintenance program.

## Maintenance Review Board (MRB) Document:

- (1) Defines the initial maintenance program for new aircraft.
- (2) Includes all initial time limits except those contained in the Type Certificate Data Sheet.

## Maintenance Significant Item (MSI):

Items identified by the manufacturer whose failure:

- (a) could affect safety (on ground or in flight) and/or
- (b) is undetectable during operations, and/or
- (c) could have significant operational impact, and/or
- (d) could have significant economic impact.

#### Maintenance Supply Procedure (MSP):

MSP's are intended to provide knowledge and Instructions to carry out specific tasks in Inventory Management, Data Control, Turbine and Airframe Components, Maintenance Supply and Distribution (SFO), Line Supply and Distribution, Purchasing, Warranty Administration and repair rework. Refer to MSP 02-004 for a glossary of terms and acronyms.

#### Major Alteration:

- (1) An alteration not listed in the aircraft or engine specification that might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affect airworthiness.
- (2) An alteration not listed in the aircraft or engine specification that is not done according to accepted practices or cannot be done by elementary operations (EG Ref: AOP 45-05-00-03, 45-05-00-15, 45-50-00-03).

#### Major Repair:

- (1) A repair that if improperly done, might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affect airworthiness.
- (2) A repair that is not done according to accepted practices or cannot be done by elementary operations. (EG Refer to AOP 45-50-00-03, 45-05-00-15)

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Mandatory Overhaul Requirements:

The minimum requirements which must be met to complete an overhaul on a unit or system.

## Manuals:

(1) Accepted Manuals - Manuals which are approved and revised by UA through the Standard revision process. A "after-the-fact" copy of the manual or revision is provided to the FAA for their review. The FAA will remain silent for acceptance or reject the manual through formal notification. Examples of these manuals are; Vendor Maintenance Manuals, UA Maintenance Manuals, AOP's or Departmental Procedures Manuals (DOP's).

(2) Approved Manuals - Manuals and their revisions which must be approved by the FAA before they can be used in UA's maintenance system. These manuals include; Designated Alteration Station (DAS) Procedures Manual, Major Repair

Procedures Manual and Minimum Equipment List (MEL).

(3) Class I Manual is a United Airlines' (UA) Controlled document used in the performance of aircraft maintenance. They are approved for use in performing maintenance on United Airlines (UA) aircraft, engines and components. They are published and revised by UA to conform to UA configurations. Examples of these manuals are: UA 767 Aircraft Maintenance Manual, UA General Processes Manual, UA 747 Illustrated Parts Catalog, UA 757 Routine Job Cards, UA CFM 56 Power Plant Build Manual, etc.

- (4) Class II Manual is an Original Equipment Manufacturer's (OEM) or UA controlled document used in the performance of aircraft maintenance. They are approved for use in performing maintenance on UA aircraft, engines and components in specific cases. Such as a detailed repair, aircraft recovery or the details of a component part that is not found in a Class I manual. They are issued by Technical Information Management and may not reflect UA modifications. These manuals may be used for maintenance on UA equipment only after the user has verified equivalence with UA configuration. Examples of these manuals are: Boeing 747 Structural Repair Manual, Douglas DC10 Aircraft Recovery Manual, General Electric CFM56 Overhaul Manual, Weber Passenger Chair Overhaul Manual, etc.
- (5) Class III Manual is a UA or Vendor published manual used as a training aid or a general reference guide. They are not approved for performing maintenance on UA aircraft, engines or component. Examples of these manuals are: UA 737 Systems Training Manual, UA 747 Flight Manual, Boeing 767 System Schematic Manual, etc.

#### Manufacturer's Manual:

Provides operation and maintenance for a particular aircraft, system or component.

#### Mean Time Between Failure (MTBF):

- (1) The ratio of total unit time in service in a given period to the number of unit failures that occurred during the same period.
- (2) The reciprocal of the premature removal rate in unit hours.

#### Mechanical Reliability Analysis Program:

(1) This program describes the reliability methods used to control the maintenance program for aircraft, systems, components and engines (EG Ref: AOP 45-04-00-01).

#### Modification:

Refer to Alteration.

## Monitoring By Exception:

A time control system whereby a unit can be released from the shop as a part time spare even though units of that type are not "time monitored."

#### MR Unit:

A special group of recoverable units to which an MR number is assigned for identification and record keeping purposes. An MR number is a number assigned by United Airlines.

## Next Higher Assembly (NHA):

The assembly on which the particular unit under discussion is directly attached.

## Multiple Element Fatigue Damage:

The symultaneous cracking of multiple load path discrete elements working at similar stress levels.

## Multiple Site Fatique Damage:

The presence of a number of adjacent, small cracks that might coalesce to form a single long crack.

## Non-Basic Engine Removal:

The removal of an engine for any actual malfunction, failure or defect of a part or component, external to the engine, and under ATA chapters other than Chapter 72 of the Engine Manual.

#### NonMetallics:

Any structural material made from fibrous or laminated components bonded together by a medium. Materials such as graphite epoxy, boron epoxy, fiber glass, kevlar epoxy, acrylics and the like are nonmetallics. Nonmetallics include adhesives used to join other metallic or non-metallic structural materials.

#### Non-Routine Maintenance:

Unscheduled maintenance resulting from write-ups, routine inspections, checks, or overhauls.

#### NOTE

Call attention to methods which make the job easier.

#### On Condition (OC):

- (1) One of the four primary maintenance processes.
- (2) OC requires repetitive inspections or tests to determine reduced resistance to failure for specific failure modes.

## Operating Crew Normal Duties:

**Operating Crew** 

Qualified cockpit and cabin attendant personnel who are on duty.

Normal Duties

Those duties associated with the routine operation of the aircraft, on a daily basis, to include the following

- (a) Procedures and checks performed during aircraft operation.
- (b) Recognition of abnormalities or failures by the operating crew through the use of normal physical senses (e.g. odor, noise, vibration, temperature, visual

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS observation of damage or failure, changes in input physical force requirements, etc.)

# Operating Time:

(1) The time that an airplane is operated.

(2) Operating time may be expressed as hours, cycles, or calendar time. For maintenance purposes, operating time is usually measured in flying hours which is equivalent to the FAA term "Time In Service."

(3) Certain assemblies such as the APU may have clocks installed to record the actual hours of operation, but their maintenance limits may be specified in airplane operating hours.

### Operational Check:

An operational check is a task to determine that an item is fulfilling its intended purpose. Does not require quantitative tolerances. This is a failure finding task.

## Operational Effects:

Failure effects which interfere with the completion of the aircraft mission. These failures cause delays, cancellations, ground or flight interruptions, high drag coefficients, altitude restrictions, etc.

Operations Specifications - Maintenance:

- (1) This document is required of all Certificated Air Carriers by Federal Aviation Regulations, Part 121. It is the FAA Approved Maintenance Program which lists the minimum maintenance requirements for the aircraft structure, systems, components and engines.
- (2) Maintenance intervals for aircraft structures, systems, components, or internal engine parts are contained in the Operations Specifications Maintenance, the Maintenance Manual, the Part Condition Sampling Schedule, the Structural Inspection Specification F Report, the Electrical Inspection Specification F Report, or System/Component EMAC.
- (3) Formal revisions to the Operations Specifications -

Maintenance are submitted to the FAA by Maintenance Programs.

## Other Structure

Structure which is not judged to be a Structural Significant item. "Other structure" is defined both externally and internally within zonal boundaries.

#### Outside Service Vendor (OSV):

A non-United Airlines repair agency or facility which may be used for the maintenance, overhaul, repair or modification of aircraft, systems, components, and engines.

## Overhaul:

- (1) Maintenance required to disassemble, clean as necessary to inspect all parts of the unit to ensure its serviceability, repair as required, reassemble and test in accordance with United Airlines' procedures.
- (2) Disassembly is not intended to mean disassemble completely in those cases where it would damage a unit beyond further serviceability.

#### Overhaul Time Limit:

- (1) The authorized operating time by which each unit or system of a given type must be overhauled.
- (2) Refer to Time Between Overhauls (TBO).

#### Part:

One piece or two or more pieces joined together which are not normally subject to disassembly without destruction of their designed use. May also be called a Component.

## Part Condition Sampling Schedule (PCSS):

List the engine parts requiring periodic sampling or maintenance and the time at which sampling is required.

### Part Manufacturing Authority (PMA):

- (1) FAA authority to for an operator or agency to manufacture specific aircraft parts that affect the airworthiness of an aircraft.
- (2) Each such manufactured part (by part number) must have a separate PMA.

#### Part Time Spare:

- (1) A serviceable unit which has been released from the shop with less than one full run remaining.
- (2) Refer to run.

### Planned Engine Removal:

The removal of any engine not consider an unplanned engine removal (Refer to Unplanned Engine Removal definition).

#### Premature Removal:

- (1) Removal of a unit for reasons other than schedule, convenience or COA.
- (2) May also be referred to as "unscheduled removals" or "irregular removals."

### Quality:

The extent to which a unit conforms to specified standards (usually at the time of final inspection.)

#### Quality Related Engine Removals:

An engine removal which results from a personnel error, fault workmanship, or a part that was defective at the time of installation.

#### Recoverable Unit:

- (1) A type of assembly or component which can normally be economically restored to a serviceable condition by repair, parts replacement, inspection, and testing.
- (2) Consumption of these items is expensed when the unit is scrapped.

#### Reliability:

The probability of performing within specified standards for a given time interval.

## Repair:

A maintenance operation performed in order to correct a specific defect in a unit.

#### Repairable:

(1) A unit which is not considered suitable for service but is suitable for being repaired to restore it to a serviceable condition.

## Repeat Interval

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The interval between successive accomplishments of a specific maintenance task after reaching the threshold interval.

### Residual Strength

The strength of damaged structure.

#### Restoration

That work necessary to return the item to a specific standard. Restoration may vary from cleaning or replacement of single parts to complete overhaul.

## Rotable Flight Equipment:

An term used to describe recoverable units which are capitalized and written off over the average remaining service life of the applicable aircraft fleet.

#### Rotable Unit:

It describes a component that has a fixed overhaul life, has a separate individual serial number, and is suitable to being overhauled an indefinite number of times.

#### Run:

- (1) The basic authorized operating time period for maintenance time control purposes.
- (2) A run may be the authorized time between overhauls, or it may be a multiple of the TBO, HMV, or BCP of a unit's parent assembly.
- (3) The run for individually time controlled units is expressed in hours.
- (4) The run for certain engine accessories which are time—controlled as a group is expressed in the AHM interval.
- (5) The run for airframe components and accessories which are not individually time controlled is expressed in multiples of the HMV or BCP.

#### Safe Life Structure:

Structure which is not practical to design or qualify as damage tolerant. ts reliability is protected by discard limits which remove items from service before fatigue cracking is expected.

#### Scheduled Maintenance Check:

Any of the maintenance opportunities which are prepackaged and are accomplished on a regular basis.

#### Scheduled Removal:

Removal of a unit prior to the unit exceeding a limit defined by the approved UA Maintenance Program.

#### Serviceable:

- (1) Maintenance necessary to restore or confirm a unit's inherent resistance to failure.
- (2) Such maintenance may require a partial disassembly, if necessary to inspect for potential age or wear related failure modes, or as little as a test.

#### Service Bulletins:

Manufacturer supplied document which provides specifications and procedures for modifying hardware to correct defects or improve reliability.

#### Shutdown:

(1) Delay/stoppage of engine operation for any reason.

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(2) For the powerplant maintenance program, shutdowns for training or normal operations are not counted.

## Structural Assembly:

One or more structural elements which together provide a basis structural function.

#### Structurll Detail:

The lowest functional level in an aircraft structure. A discrete region or area of a structural element, or a boundary intersection of two or more elements.

## Structural Element:

Two or more structural details which together form an identified manufacturer's assembly part.

#### Structural Function:

The mod of action of aircraft structure. It includes the acceptance and transfer of specified loads in items (details/ elements/assemblies) and provides consistently adequate aircraft response and flight characteristics.

### Sub-Assembly:

A standard portion of an assembly.

#### Sub-Fleet:

All airplanes of a specific model within the fleet type. (DC10-10 and DC10-30 are subfleets of the DC-10 fleet.)

### System:

A combination of units, together with interconnecting apparatus, which performs a particular function.

#### Tasks- Maintenance:

An action or set of actions required to achieve a desired outcome which restores an item or maintains an item in serviceable condition, including inspection and determination of condition.

## Technical Requirements:

The criteria by which a unit or system is determined to be acceptable for its intended service.

#### Threshold:

The initial accomplishment of a specific maintenance task.

#### Time Between Overhauls (TBO):

The authorized operating time between overhauls.

#### Time Monitoring System:

- (1) A system for monitoring the time histories of individual units.
- (2) The monitoring system is used to schedule the removal of these units before they exceed their respective time limits.
- (3) Because such units are time monitored, they may be base checked between overhauls.

#### Time Since Overhaul (TSO):

The operating time of a unit or system since its preceding overhauls.

### Total Time (TT):

- (1) The total operating age since manufacture.
- (2) Refer to Life Limit.

## Type Certificate Data Sheet:

- (1) Prescribes conditions and limitations under which aircraft meet the airworthiness requirements of the FAR's.
- (2) May include total time limits on certain aircraft components.

#### Unit:

Refer to Assembly.

## Unit Type:

All units of a particular category, usually defined by make and model or part number.

## **Unnecessary Engine Removals:**

- (1) An engine removal that could have been repaired on-wing where the troubleshooting and corrective maintenance action could have been accomplished in less time (less than 8 hours) than it takes to replace the engine.
- (2) For engine fixes taking more time than required for engine replacement (greater than 8 hours) total economic impact must be considered.

### Unplanned Engine Removal:

The removal of an engine that is considered incapable of continued operation.

NOTE: All other engine removals are considered "Planned".

#### Utilization:

- (1) The average daily flying hours for in-service aircraft.
- (2) Utilization is computed by dividing the total flying hours accumulated by a given fleet in a reporting period by the number of in-service aircraft days during the same period.

#### Verified Failure:

(1) A premature removal where the defect found by the shop sustantiates the reason for removal of the unit.

#### Visual Check:

A visual check is an observation to determine that an item is fulfilling its intended purpose. Does not require quantitive tolerances. This is a failure finding task.

#### WARNING

Calls attention to methods, procedures or limits which must be followed precisely to avoid INJURY OR DEATH TO

#### Zonal Inspection Program

- (1) The airplane was divided into zones or groups of zones based on consideration of location, content and access.
- (2) Each zonal area was reviewed to determine the types of systems or structures components installed and associated wiring, tubing, ducting, pulleys, quadrants, supports, etc. The likelihood of deterioration of these components, including the eggect of the operational environment was considered.

ACTION VERBS, ACRONYMS, ABBREVIATIONS AND TERMS

- (3) Zonal inspection tasks provide periodic checks of the security and condition of components to detect degredation such as chafing of tubing, loose duct supports, wire damage, cable and pulley wear, fluid leaks, inadequate drainage, and general corrosion not covered in systems, powerplant or structures programs.
- (4) Additionally, selected General Visual tasks were transferred to the zonal program from the systems, powerplant and structural programs. The intent of these transferred tasks is satisfied by performing the zonal inspections at the defined repeat intervals and they are not, therefore, included in the structures, systems or powerplant programs.